We claim:

1. A method of providing a downhole seal in a drilled bore between inner tubing and outer tubing, the method comprising:

providing an intermediate tubing section defining means for sealingly engaging with the inner tubing; and

plastically deforming the intermediate tubing section downhole to form an annular extension, said extension creating a sealing contact with the outer tubing.

2. The method of claim 1, wherein said deformation of the intermediate tubing section is at least partially as a result of compressive yield.

3. The method of claim 2, wherein said deformation of the intermediate tubing section is by rolling expansion to cause compressive plastic deformation of the tubing section and a localised reduction in wall thickness resulting in a subsequent increase in diameter.

4. The method of claim 1, wherein the intermediate tubing section is of metal and deforming the tubing section creates a metal-to-metal seal between the intermediate tubing section and outer tubing.

5. The method of claim 1, wherein a seal is provided between the intermediate tubing section and the inner tubing by providing the intermediate tubing section with a polished bore portion and providing the inner tubing with a corresponding outer wall portion defining sealing bands of elastomer.

6. The method of claim 1, wherein the outer tubing is elastically deformed to grip the extension.

7. The method of claim 6, wherein the outer tubing is deformed from contact with the extension as the extension is formed.

8. The method of claim 6, wherein the outer tubing is plastically deformed.

9. The method of claim 1, wherein the inner tubing is production tubing.

10. The method of claim 1, wherein the outer tubing is bore-lining casing.

11. The method of claim 1, wherein the intermediate tubing section is plastically deformed at a plurality of axially spaced locations to form a plurality of annular extensions.

12. The method of claim 1, wherein relatively ductile material is provided between the intermediate tubing section and the outer tubing.

13. The method of claim 12, wherein the relatively ductile material is provided in the form of a plurality of axially spaced bands, between areas of the intermediate tubing section which are intended to be subject to greatest deformation.

14. The method of claim 1, wherein relatively hard material is provided between the intermediate tubing section and the outer tubing, such that on deformation of the intermediate tubing section the softer material of one or both of the intermediate tubing section and the outer tubing deforms to accommodate the harder material and thus facilitates in securing the coupling against relative axial or rotational movement.

15. The method of claim 14, wherein the relatively hard material is provided in the form or relatively small elements.

16. The method of claim 1, further comprising the step of running an expander device into the bore within the intermediate tubing section and energising the expander device to radially deform at least the intermediate tubing section.

17. The method of claim 16, wherein the device is run into the bore together with the intermediate tubing section.

18. The method of claim 16, wherein the expander device defines a plurality of circumferentially spaced tubing engaging portions, at least one of which is radially extendable, and is rotated to create the annular extension in the tubing section.

19. The method of claim 18, wherein an initial radial extension of said at least one tubing engaging portion, prior to rotation of the device, deforms the tubing section and creates an initial contact between the intermediate tubing section and the outer tubing which is sufficient to hold the tubing section against rotation.

20. The method of claim 1, wherein at the extension the intermediate tubing section is deformed such that an inner thickness of the tubing section wall is in compression, and an outer thickness of the wall is in tension.